

Menstrual Cycles in 28 Days

Have you ever wondered about the connection between your body's 28 day cycle and the cycle of the moon? Here's the theory. In the days before electricity, women's bodies were influenced by the amount of moonlight we saw. Just as sunlight and moonlight affect plants and animals, your hormones were triggered by levels of moonlight. And, all women cycled together. Today, with artificial light everywhere, day and night, your cycles no longer correspond to the moon. This article is dedicated to exploring menses: fact and fiction.

Consider for a moment all you've heard about menstruation. Who first told you? What did they call it? How is menstruation viewed by your culture? What taboos have influenced you? How does your partner feel about your period? What impact has advertising had on your knowledge and attitude? What is the motivation of the advertiser? Is your experience different now compared to earlier in your life?

Let us take a look at the menstrual cycle and how you can influence it. As this may seem very complicated, the process, once understood can help you to manage your cycle and your life better.

Basic Biology: the cycle begins

Did you know that when a baby girl is born, she has all the eggs her body will ever use, and many more, perhaps as many as 450,000? They are stored in her **ovaries**, each inside its own sac called a **follicle**. As she matures into puberty, her body begins producing various hormones that cause the eggs to mature. This is the beginning of her first cycle; it's a cycle that will repeat throughout her life until the end of menopause.

Let's start with the **hypothalamus**. The hypothalamus is a gland in the brain responsible for regulating the body's thirst, hunger, sleep patterns, libido and endocrine functions. It releases the chemical messenger **Follicle Stimulating Hormone Releasing Factor (FSH-RF)** to tell the **pituitary**, another gland in the brain, to do its job. The pituitary then secretes **Follicle Stimulating Hormone (FSH)** and a little **Leutenizing Hormone (LH)** into the bloodstream which cause the follicles to begin to mature.

The maturing follicles then release another hormone, **estrogen**. As the follicles ripen over a period of about seven days, they secrete more and more estrogen into the bloodstream. Estrogen causes the lining of the uterus to thicken. It causes the cervical mucous to change. When the estrogen level reaches a certain point it causes the hypothalamus to release **Leutenizing Hormone Releasing Factor (LH-RF)** causing the pituitary to release a large amount of **Leutenizing Hormone (LH)**. This surge of LH triggers the one most mature follicle to burst open and release an egg. This is called ovulation. [Many birth control pills work by blocking this LH surge, thus inhibiting the release of an egg.

Ovulation

As ovulation approaches, the blood supply to the ovary increases and the ligaments contract, pulling the ovary closer to the Fallopian tube, allowing the egg, once released, to find its way into the tube. Just before ovulation, a woman's cervix secretes an

abundance of clear "fertile mucous" which is characteristically stretchy. Fertile mucous helps facilitate the sperm's movement toward the egg. Some women use daily mucous monitoring to determine when they are most likely to become pregnant. Mid cycle, some women also experience cramping or other sensations. Basal body temperature rises right after ovulation and stays higher by about .4 degrees F until a few days before the next period.

Inside the Fallopian tube, the egg is carried along by tiny, hairlike projections, called "cilia" toward the uterus. Fertilization occurs if sperm are present as the live egg reaches the uterus. [A tubal pregnancy (ectopic pregnancy) is the rare situation where the egg is fertilized inside the tube. It is a dangerous life-threatening situation. If a fertilized egg begins to develop into an embryo inside the tube it will rupture the tube causing internal bleeding. Surgery is required if the tube ruptures. If the pregnancy is discovered before the tube ruptures, medication (Methotrexate) can be used to stop the development of the embryo.]

A woman can use a speculum to monitor her own ovulation and use this information to avoid or encourage a pregnancy. This is the all-natural fertility awareness method (FAM) of family planning.

Uterine Changes

Between midcycle and menstruation, the follicle from which the egg burst becomes the corpus luteum (yellow body). As it heals, it produces the hormones estrogen and, in larger amounts, progesterone which is necessary for the maintenance of a pregnancy. [RU-486 works by blocking progesterone production.] In the later stages of healing, if the uterus is not pregnant, the follicle turns white and is called the corpus albicans.

Estrogen and progesterone are sometimes called "female" hormones, but both men and women have them, just in different concentrations.

Progesterone causes the surface of the uterine lining, the endometrium, to become covered with mucous, secreted from glands within the lining itself. If fertilization and implantation do not occur, the spiral arteries of the lining close off, stopping blood flow to the surface of the lining. The blood pools into "venous lakes" which, once full, burst and, with the endometrial lining, form the menstrual flow. Most periods last 4 to 8 days but this length varies over the course of a lifetime.

Cramps and Other Sensations

Women can experience a variety of sensations before, during or after their menses. Common complaints include backache, pain in the inner thighs, bloating, nausea, diarrhea, constipation, headaches, breast tenderness, irritability, and other mood changes. Women also experience positive sensations such as relief, release, euphoria, new beginning, invigoration, connection with nature, creative energy, exhilaration, increased sex drive and more intense orgasms.

Uterine cramping is one of the most common uncomfortable sensations women may have during menstruation. There are two kinds of cramping. Spasmodic cramping is probably caused by prostaglandins, chemicals that affect muscle tension. Some prostaglandin's

cause relaxation, and some cause constriction. A diet high in linoleic and linolenic acids, found in vegetables and fish, increases the prostaglandins for aiding muscle relaxation.

Congestive cramping causes the body to retain fluids and salt. To counter congestive cramping, avoid wheat and dairy products, alcohol, caffeine, and refined sugar.

Natural options to alleviate cramping:

- Increase exercise. This will improve blood and oxygen circulation throughout the body, including the pelvis.
- Try not using tampons. Many women find tampons increase cramping. Don't select an IUD (intrauterine device) as your birth control method.
- Avoid red meat, refined sugars, milk, and fatty foods.
- Eat lots of fresh vegetables, whole grains (especially if you experience constipation or indigestion), nuts, seeds and fruit.
- Increase proper nutritional supplementation by getting your vitamin and mineral needs determined by functional lab testing.
- Avoid caffeine. It constricts blood vessels and increases tension.
- Meditate, get a massage.
- Have an orgasm (alone or with a partner).
- Drink ginger root tea (especially if you experience fatigue).
- Put cayenne pepper on food. It is a vasodilator and improves circulation.
- Breathe deeply, relax, notice where you hold tension in your body and let it go.
- Get your spine checked out by a doctor of chiropractic who works with women and menstrual problems. If you have a nerve pinched that directly influences the uterus and ovaries, you could alleviate much of your problems with getting that corrected.
- Take time for yourself!

Anecdotal information suggests eliminating Nutra-Sweet from the diet will significantly relieve menstrual cramps. If you drink sugar-free sodas or other forms of Nutra-Sweet, try eliminating them completely for two months and see what happens.

Lifestyle

The hormones in our bodies are especially sensitive to diet and nutrition. PMS and menstrual cramping are not diseases, but rather, symptoms of poor nutrition.

Premenstrual Syndrome or PMS

PMS has been known by women for many many years. However, within the past 30 or so years, pharmaceutical companies have targeted and created a market to treat this normal part of a woman's cycle as a disease. These companies then benefit from the sale of drugs and treatments.

Premenstrual syndrome refers to the collection of symptoms or sensations women experience as a result of high hormone levels before, and sometimes during, their periods.

One type of PMS is characterized by anxiety, irritability and mood swings. These feelings are usually relieved with the onset of bleeding. Most likely, this type relates to the balance

between estrogen and progesterone. If estrogen predominates, anxiety occurs. If there's more progesterone, depression may be a complaint.

Sugar craving, fatigue and headaches signify a different type of PMS. In addition to sugar, women may crave chocolate, white bread, white rice, pastries, and noodles. These food cravings may be caused by the increased responsiveness to insulin related to increased hormone levels before menstruation. In this circumstance, women may experience symptoms of low blood sugar; their brains are signaling a need for fuel. A consistent diet that includes complex carbohydrates will provide a steady flow of energy to the brain and counter the ups and downs of blood sugar variations.

Menstrual Myths

- *Every woman's cycle is or should be 28 days long.*
- *Every woman will or should bleed every month.*
- *Every woman will or should ovulate every cycle.*
- *If a woman bleeds, she is not pregnant.*
- *A woman cannot ovulate or get pregnant while she is menstruating.*

The above statements are myths. Every woman is different.

It's true that most women will have cycles that are around 28 days. But, a woman can be healthy and normal and have just 3 or 4 cycles a year. [However, while variations might be healthy and normal, they could also be a sign of a serious underlying problem. For example, a recent news article suggested that irregular menstrual cycles may predict Type 2 Diabetes.]

Ovulation occurs about 14-16 days *before* women have their period (not 14 days *after* the start of their period). The second half of the cycle, ovulation to menstruation, is fairly consistently the same length, but the first part changes from person to person and from cycle to cycle. In rare cases, women may ovulate twice in a month, once from each ovary.

Conception/Fertilization of an egg, can only occur *after* ovulation. The egg stays alive for about 24 hours once released from the ovary. Sperm can stay alive inside a woman's body for 3-4 days, but possibly as long as 6-7 days. If a couple has intercourse before or after ovulation occurs, they can get pregnant, since the live sperm are already inside the woman's body when ovulation occurs. Thus a woman can become pregnant from intercourse for about 7-10 days in the middle of her cycle. (See Fertility Awareness for a complete description of visible signs of ovulation.)

Fertility Awareness is a birth control method where women monitor their cycles daily to identify ovulation. They are learning to predict ovulation to prevent or encourage pregnancy. It requires training and diligent record keeping.

Menopause

Technically menopause is the last menstrual flow of a woman's life and the climacteric is period of time preceding and following this event. In general usage, menopause refers to

the whole process. For most women, menopause occurs between the ages of forty and sixty and takes place over a period from 6 months to three years.

The menstrual cycle usually goes through many changes, some slow and some sudden, before stopping altogether. A woman's periods may become erratic, closer together, or further apart. She may skip a period or two, or have spotting at other times in her cycle.

A common experience is loss of large amounts of blood with a period and passage of large clots. When a woman nears the cessation of her periods, she may not ovulate for one cycle or several cycles. In this case, the endometrium doesn't receive the chemical message to stop thickening. It grows and grows until its heavy bulk causes a heavy flow.

Signals of menopause include hot flashes or flushes, changes in sleep patterns, headaches or migraines, high energy, high creativity, and/or mood changes. As with PMS, some of these symptoms are hormone imbalances caused by poor nutrition.

Did You Know?

- Women lose between 20 and 80 cc's (1-2 ounces) of blood during a normal period.
- One in six fertilized eggs naturally results in miscarriage, some of which are reabsorbed by the body and the woman is not aware she's been pregnant.
- The length of a woman's menstrual cycle (the number of days from the first day of one period to the first day of the next) is determined by the number of days it takes her ovary to release an egg. Once an egg is released, it is about 14 days until menstruation, for nearly all women.

To learn more about YOUR OWN cycle, keep a journal or calendar and make note of how you feel, emotionally and physically, thoughts about yourself, your body, and your relationships with other cycling women.

To get a better understanding about your own cycle, contact our office by calling 858-481-1131 or e-mail at info@drstevenross.com and set up an appointment with Dr. Ross to discuss your particular needs. Advice can be provided by obtaining a proper history and recommendations for Functional lab testing .